Neogene and Pleistocene fossil brachiopods of the Eastern Islands. Current appointments

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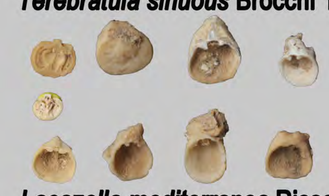
Numerous specimens from 4 taxon of fossil brachiopods have been found in the different fossiliferous outcrops of the Canary Islands. These fossils have been found in the deposits of Mio-Pliocene age of the eastern Canary Islands, described and illustrated by Meco et ali. 2005 and in the outcrops interpreted as a tsunami deposits in Piedra Alta, Lanzarote, belonging to the Marine Isotope Stage 11 dated to circa 481 ka .

Terebratula sinuous Brocchi 1814



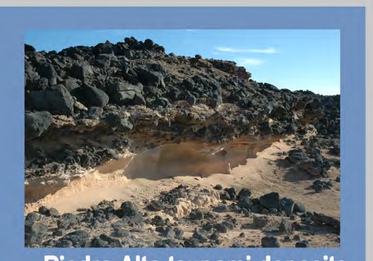
Lacazella mediterranea Risso 1826

Thecidium cf . digitatum (Sowerby 1823)

Terebratulina caputserpentis (Zbyszewski, 1957)

T. sinuosa Brocchi 1814. Las Palmas de Gran Canaria

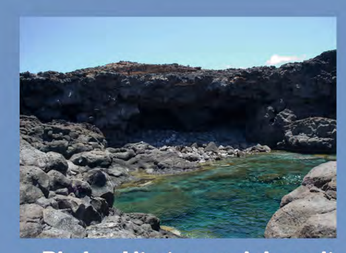
Ajuí, neogene marine deposits below pillow lavas dated on 4.8 Ma



Piedra Alta tsunami deposits

Las Palmas de Gran Canaria.

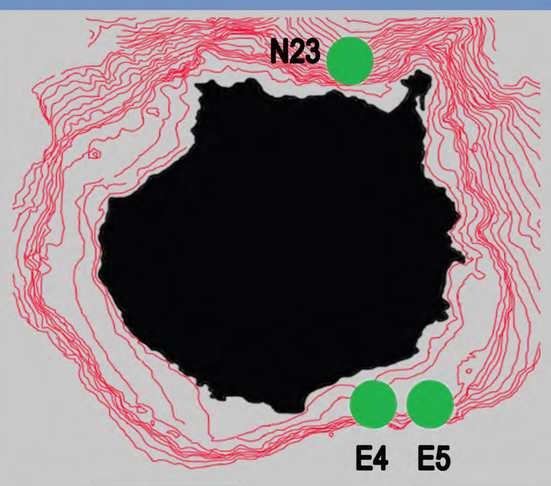
Esquinzo



Piedra Alta tsunami deposits

In addition to these fossil brachiopodes, 3 actual braquipods have been found in the Canary Islands. Those samples provided by pick up of surface sediment samples made in Gran Canaria and El Hierro.

Station (Sample)	Coordinates	Depth	Brachiopods	Observations
E4	27°46.98' N 15°22.05' O	80 m	*Megerlia truncata*	Specimens highly fragmented
E5	27°47.02' N 15°21.06' O	84 m	*Megerlia truncata, Argyrotheca barrettiana*	Good condition of conservation
N23	28°09.857' N 15°31.961' O	93 m	*Megerlia truncata*	Good condition of conservation
El Hierro		21 m	*Pajaudina atlántica*	Numerous specimens, agglomerated together



Argyrotheca barrettiatia (Davidson, 1866)

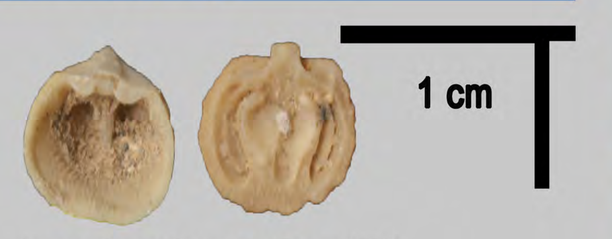
Pajaudina atlantica (Logan 1988)

Megerlia truncata (Linne 1767)

A. barretiana (Davidson, 1866) and *M. truncata* (Linne 1767) are first records for the Canary Islands.

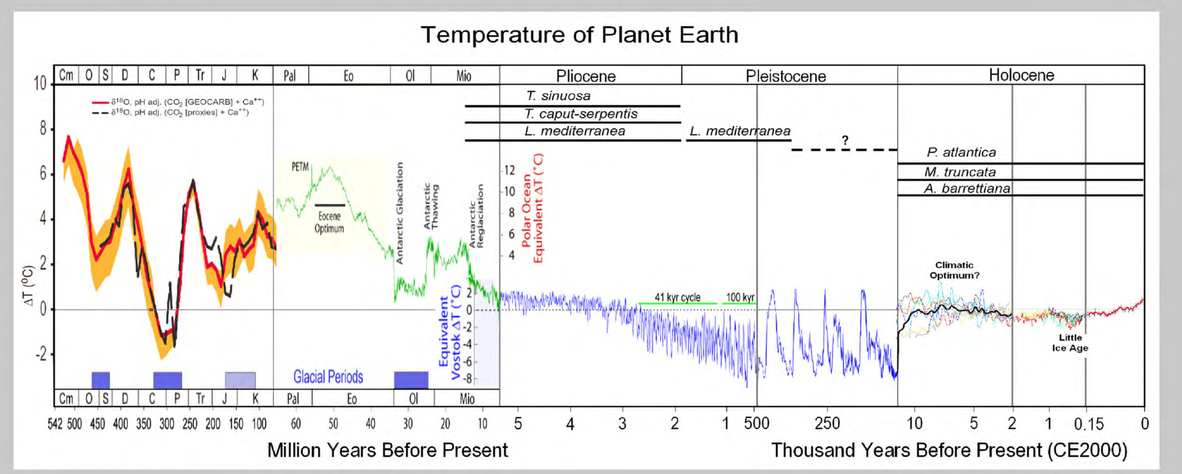
We consider *P. atlantica* (Logan 1988) and *L. mediterranea* (Risso, 1826) as different species. The morphological differences between them show that both species are not only different, but also belong to different genus according to Logan proposed (1988, 2004a and 2004b).

Pajaudina atlantica (Logan 1988)



Lacazella mediterranea Risso 1826

L. mediterranea (Risso, 1826) is found in the Upper Neogene deposits and in the MIS 11 deposits from Piedra Alta, Lanzarote. The current presence of *P. atlantica* (Logan 1988) suggests an affinity for ecological-climatic conditions different than those of *L. mediterranea* (Risso, 1826) conditions, which appear related to a warmer climate conditions than the present ones.



Fossil and present brachiopod species distribution in the Canary Islands. The dashed line with question symbol indicates a nearby 400 kyr time lapse with no brachiopods remains. *P. atlantica* has been present in the Canary Islands almost since the beginning of the Holocene. Modified from: EPICA Community (2004), and Zachos et al. (2001).

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